



SOUTHWEST RESEARCH INSTITUTE®

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Institute Calibration Laboratory
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Calibration Laboratory
Certificate #0972-01

Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DON BANNON

Manufacturer / Model: ORION / 720A

Description: PH/ION METER

Serial No: 003368

Asset No: 001441

Procedure: PH METERS MV ONLY - 11 SEP 07

Work Order: 303078511

Date Issued: Jan 24, 2008

Calibration Date: Jan 24, 2008

***Calibration Due:** Jan 24, 2009

Calibration Location: Bldg. 64

Environment: Temp. 70.0°F Hum. 50 %RH

****Data Type:** FOUND-LEFT

DivID/Location:

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 2005, ANSI/NCSL Z540-1-1994 and relevant requirements of the ISO 9000-2000 standard. This certificate shall not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. This certificate shall not be used to claim product endorsement by Southwest Research Institute, American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government. Results of this calibration relate only to the instrument described above at the time of calibration and does not imply any long term stability of the instrument.

*Determined by the customer, does not imply the instrument will remain within tolerance as any number of factors may cause an out-of-tolerance condition before this date. **Found/Left = adjustment and/or repair was not required, As Left = adjusted and/or repaired was required. The client has sole responsibility for determination of in-/out-of-tolerance or compliance/noncompliance. See Remarks or attached Measurement Report with the same Work Order number for data.

Reported uncertainty calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM) and represents an expanded uncertainty with a coverage factor of k=2 to approximate a 95% confidence level.

Remarks: Millivolts calibrated only.

Standards Used

Asset No.	Serial No.	Manufacturer	Model	Description	Cal Due
000182	5200003	FLUKE	5700A/EP	CALIBRATOR	Feb 12, 08

Reviewed by: wgh srk jrg blt pwc
Metrology Technician

Measurements by: Mark Romero
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	303078511	Mfr.	Orion	Technician	Mark Romero
Asset No.	001441	Model	720A		
Serial No.	003368	Type.	pH Meter	Cal Date.	24-Jan-08

Remarks:

LIMITED CAL: Millivolts Only

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts	Result
Input 1	0.0	0.0	0.0	0.5	0.12	Pass
	1000.0	1000.0	0.0	1.0	0.12	Pass
	-1000.0	-1000.1	-0.1	1.0	0.12	Pass
mVolts	mVolts	mVolts	mVolts	mVolts	mVolts	
Input 2	0.0	0.1	0.1	0.5	0.12	Pass
	1000.0	1000.1	0.1	1.0	0.12	Pass
	-1000.0	-1000.1	-0.1	1.0	0.12	Pass

END OF REPORT